

species under the Endangered Species Act of 1973, as amended. *Zanthoxylum thomsonianum* is only found in seasonally deciduous vegetation formations that occur on limestone and on areas of volcanic origin in northern and central Puerto Rico and in southern St. Thomas and St. John, Virgin Islands. Fewer than 1,000 individuals of the species are known to exist. All five sites that support populations of *Zanthoxylum thomsonianum* are located on privately owned land. The continued existence of this species is endangered by its very limited number, plus potential habitat modifications or destruction due to limestone mining, urbanization, and road maintenance. This final rule will implement the protection provided by the Endangered Species Act of 1973, as amended, for *Zanthoxylum thomsonianum*.

**DATES:** The effective date of this rule is January 21, 1986.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Banco de Ponce Building, Dr. Basora and Mendez Vigo Streets, P.O. Box 3005—Marina Station, Mayagüez, Puerto Rico 00709, and at the Service's Regional Office, Richard B. Russell Federal Building, Room 1282, 75 Spring Street SW., Atlanta, Georgia 30303.

**FOR FURTHER INFORMATION CONTACT:** Mr. David Densmore at the above Mayagüez address (809/833-5760) or Mr. Richard P. Ingram at the above Atlanta Regional Office address (404/221-3583 or FTS 242-3583).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Zanthoxylum thomsonianum* was first described by Krug and Urban in 1896, on the basis of a specimen collected by Eggers in St. Thomas (now part of the U.S. Territory of the Virgin Islands) in 1880. The species was not collected again in St. Thomas until 1980 (Vivaldi and Woodbury, 1981). It was collected by Britton and Shafer on St. John, Virgin Islands, in 1913 and found there again by Woodbury in 1983. It was also discovered by Woodbury in the early 1960's at the summit of Piedras Chiquitas (a rocky outcrop between the municipalities of Salinas and Coamo) and along Road 155, north of Coamo, Commonwealth of Puerto Rico. More recently, it was discovered by a high school teacher in the upper part of the Guajataca Gorge in Isabela, Puerto Rico.

The prickly ash is an evergreen, often multi-stemmed shrub or small tree reaching 6 to 20 ft (1.8 to 6 m) in height

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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**Endangered and Threatened Wildlife and Plants; Final Rule To Determine *Zanthoxylum thomsonianum* (Prickly-ash) To Be an Endangered Species**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines a plant, *Zanthoxylum thomsonianum* (prickly-ash), to be an endangered

and up to 4 in (10 cm) in diameter at breast height. Leaves are alternate, odd-pinnate, with 5 to 9 shiny, stalkless, rounded or ovate leaflets, each having 1 or 2 sharp spines at the base and usually 1 to 3 spines on the midvein below. Flowers are minute, clustered, and unisexual, with male and female on different plants (dioecious). Fruits consist of 1 to 3 egg-shaped follicles from each flower that split along one side and contain single black, shiny seeds.

Two small specimens of *Zanthoxylum thomsonianum* were recently found at Piedras Chiquitas, where the few trees formerly known were believed to have been destroyed by hurricane winds in 1979. However, the population along Road 155 has apparently been destroyed by the combined effects of road improvement and maintenance, and illegal dumping of trash (J.L. Vivaldi, personal communication). Only two individuals of the species are known to exist at the Guajataca Gorge locale. The largest known population is located on the southern coast of St. Thomas and may consist of several hundred individuals. About 50 individuals were recently found at Gift Hill on St. John, and at least one specimen is known to exist north of Salt Pond Bay, also on St. John (R.O. Woodbury, personal communication). Specimens in the Salt Pond Bay area may be within the boundaries of the Virgin Islands National Park (J.M. Matuszak, personal communication).

*Zanthoxylum thomsonianum* was recommended for Federal listing by the Smithsonian Institution (Ayensu and DeFilipps, 1978). In August 1979, the Service contracted with Dr. José L. Vivaldi, a resident botanist of Puerto Rico, to conduct a status survey of plants considered to be candidates for listing as endangered or threatened in Puerto Rico and the Virgin Islands. Reports and documentation resulting from this survey indicated that *Zanthoxylum thomsonianum* should be proposed for listing as an endangered species. *Zanthoxylum thomsonianum* was included among the plants being considered for listing as endangered or threatened species by the Fish and Wildlife Service, as published in the **Federal Register** (45 FR 82479) dated December 15, 1980.

In a notice published in the **Federal Register** on February 15, 1983 (48 FR 6752), the Service reported the earlier acceptance of the new taxa in the Smithsonian's 1978 book as under petition within the context of section 4(b)(3)(A) of the Act, as amended in 1982. The Service subsequently found

that listing *Zanthoxylum thomsonianum* was warranted, but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act; notification of the finding was published in the January 20, 1984, **Federal Register** (49 FR 2485). An additional petition finding required in accordance with Section 4(b)(3)(B)(ii) of the Act was incorporated in the proposed rule for this species. The Service proposed to list *Zanthoxylum thomsonianum* in the February 11, 1985, **Federal Register** (50 FR 5647).

#### Summary of Comments and Recommendations

In the February 11, 1985, proposed rule (50 FR 5647) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate agencies of the Commonwealth of Puerto Rico and Government of the Virgin Islands, municipal governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting general public comment were published in the Virgin Islands *Daily News* (in English) on March 2, 1985, and in *EL Nuevo Día* (in Spanish) on March 5, 1985. Five letters of comment were received and are discussed below. No public hearing was requested; therefore none was held.

A representative of the Federal Highway Administration responded March 8, 1985, pointing out that the plants at Guajataca Gorge were not in the immediate vicinity of road maintenance or construction activities in that area. The Service notes that the proposed rule mentioned the effects of such activities only in respect to the Coamo population, which is now believed to have been destroyed by roadwork and illegal trash disposal.

Dr. José Vivaldi, Director of the Terrestrial Ecology Section of the Puerto Rico Department of Natural Resources, in a letter dated March 13, 1985, reported finding two small trees of this species at Piedras Chiquitas since his 1981 status survey, upon which the proposed rule was based. He reconfirmed that the old trees are no longer there. The final rule has incorporated this new information. Dr. Vivaldi also reported pending preparation of a regulation to implement amendments to the Organic Law of the Department that would provide authorization for designation and protection of endangered and threatened species in the Commonwealth of Puerto Rico.

The Commissioner of the Virgin Islands Department of Conservation and Cultural Affairs relayed comments from a professional botanist with the Virgin Islands Cooperative Extension Service, College of the Virgin Islands, who endorsed the proposed listing. Endorsement was also registered by Dr. Ariel Lugo, Project Leader, Institute of Tropical Forestry, Forest Service, U.S. Department of Agriculture, in support of listing this species.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Zanthoxylum thomsonianum* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Zanthoxylum thomsonianum* (Krug and Urban) P. Wilson, prickly-ash, are as follows:

A. *The present or threatened destruction, modification or curtailment of its habitat or range.* Modification and destruction of habitat appear to be the most serious threats to the species, especially in St. Thomas and St. John, Virgin Islands. The St. Thomas population is located in an area close to the capital, Charlotte Amalie, and to some of the principal hotel complexes serving the tourist trade. The plants are located on property of potential importance to tourism on a small island where land value is high. This particular area has been subdivided into lots, and plans to clear the lots and build are being formulated. The principal St. John site, with about 50 individuals, is located in the Gift Hill area of Fish Bay Estates. This area has also been subdivided into lots. At least one specimen is known to exist at the other location on St. John; this plant and possibly other isolated individuals may exist on Federal lands within the boundaries of the Virgin Island National Park. Lands adjacent to the Park would have the same development potential and value as the other site in St. John, while proposed improvement of facilities within the Park could affect other plants. Such developments, unless conducted with consideration and care, could either destroy or substantially modify habitat upon which individuals

of *Zanthoxylum thomsonianum* depend. The population at Coamo, Puerto Rico, was apparently destroyed by activities related to road improvement and by unauthorized disposal and burning of trash near the road.

Habitat modification can also be expected in the Guajataca Gorge site. Local residents use the area for planting yams, which results in *Zanthoxylum thomsonianum* plants being uprooted. In addition, nearby limestone hills are being mined for fill material. The hill where the plants are located could be razed in order to offer limestone fill for sale. These activities could destroy or adversely modify the species' habitat.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** Taking for these purposes has not been a documented factor in the decline of this species, but could become so in the future. The species occurs near habitations. Professional cultivation from cuttings and seed has so far been unsuccessful.

**C. Disease or predation.** Disease and predation have not been documented as factors in the decline of the species.

**D. The inadequacy of existing regulatory mechanisms.** The government of the Virgin Islands does not have specific rules or legislation to protect endangered or threatened plant species. The Commonwealth of Puerto Rico has recently adopted a regulation that recognizes and provides protection for certain Commonwealth listed species, including the prickly ash. For the small, critically endangered populations of the prickly ash in Puerto Rico, Federal listing enhances the protections available and the funding possibilities for needed research.

**E. Other natural or manmade factors affecting its continued existence.** *Zanthoxylum thomsonianum* is found in small, compact, localized populations. Its ecological requirements are still poorly understood. The species is dioecious, and the ratio of male to female plants is unknown. The multistemmed growth form of the species makes estimates of actual population size difficult. The two Puerto Rican populations are relictual and probably too small to guarantee the survival of a dioecious species. Hurricanes have probably affected the species in the past, as evidenced by the losses from the Piedras Chiquitas population. Individuals in exposed areas, such as coastal hills, may be adversely affected by high winds. These factors compound the vulnerability of *Zanthoxylum thomsonianum* to the previously mentioned threats.

The Service has carefully assessed the best scientific information available

regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Zanthoxylum thomsonianum* as an endangered species. With so few individuals known to exist and a high risk of damage to the plant and/or its habitat, endangered status seems an accurate assessment of the species' condition. It is not prudent to propose critical habitat because doing so would increase the risk to the species, as detailed below.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. As discussed under threat factor "B" above, *Zanthoxylum thomsonianum* may be threatened by collecting, an activity regulated by the Endangered Species Act with respect to plant only on lands under Federal jurisdiction. Publication of critical habitat localities would increase the risk of taking or vandalism. The small sizes of populations exacerbate these risks. Thus, designation of critical habitat for *Zanthoxylum thomsonianum* would not be prudent at this time.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, Commonwealth, Territory, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition, cooperative efforts with the Commonwealth and Territory, and requires that recovery action be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against collecting are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now

under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. No critical habitat is being designated for *Zanthoxylum thomsonianum*, as discussed above, and Federal involvement is likely only where habitat or plants may be affected by actions of the National Park Service or the Federal Highway Administration. In the event that facilities are upgraded or roadways widened, resurfaced, or realigned in the immediate vicinity of known populations or individuals, a strong commitment, together with funds, will be needed to protect *Zanthoxylum thomsonianum*. Designers and work crews need to be alerted so that the plants are considered in any plans for the reconstruction of nearby roads. Such work should be done with care so that the habitat of *Zanthoxylum thomsonianum* is left unchanged. It is not known whether there will be Federal involvement in any proposed subdivision developments. Federal authorization, funding, or participation in any of these projects becomes subject to the provisions of section 7 discussed above.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plant species. With respect to *Zanthoxylum thomsonianum*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions can apply to agents of the Service and Commonwealth and Territory conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. International trade and interstate commercial trade in *Zanthoxylum thomsonianum*, are not known to exist, and the plant is not presently in experimental cultivation. Therefore few permit applications

involving plants of wild origin are anticipated.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species from areas under Federal jurisdiction. Regulations implementing this new prohibition were published on September 30, 1985 (50 FR 39681). This prohibition now applies to *Zanthoxylum thomsonianum*. Permits for exceptions to this prohibition are available. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared

in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### Literature Cited

- Ayensu, E.S., and R.A. DeFilipps. 1978. Endangered and Threatened Plants of the United States. Smithsonian Institution and World Wildlife Fund, Washington, D.C. xv + 403 pp.
- Vivaldi, J.L., and R.O. Woodbury. 1981. Status report on *Zanthoxylum thomsonianum*, (Krug and Urban) P. Wilson. Status Report submitted to the U.S. Fish and Wildlife Service, Mayagüez. P.R. 39 pp.

#### Authors

The primary author of this final rule is Mr. David Densmore, U.S. Fish and Wildlife Service, Caribbean Field Office, P.O. Box 3005, Marina Station, Mayagüez, Puerto Rico 00709-3005.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife. Fish, Marine mammals, Plants (agriculture).

#### Regulation Promulgation

#### PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

**Authority:** Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Rutaceae, to the List of Endangered and Threatened Plants:

#### § 17.12 Endangered and threatened plants.

(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Rutaceae—Citrus family. <i>Zanthoxylum thomsonianum</i>	Prickly-ash	U.S.A. (PR, VI)	E	213	NA	NA

Dated: December 4, 1985.

P. Daniel Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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